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10/536,733	05/27/2005	Gerold Fleissner	1352.44946X00	4317

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EXAMINER	
VANATTA, AMY B	
ART UNIT	**PAPER NUMBER**
3765	

NOTIFICATION DATE	DELIVERY MODE
06/22/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/536,733	FLEISSNER, GEROLD	
	Examiner	Art Unit	
	Amy B. Vanatta	3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 (see lines 2-4) and claim 4, the recitations "such as", "possibly", and "for example" render the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

The claims are replete with limitations lacking proper antecedent basis, such as "the air laying method" (claim 1), "the spun bond method" (claim 1), "the direction of transport" (claim 4), "the prebonded nonwoven" (claims 10 and 12), etc.

Claim 6 is rendered indefinite by the recitation of water jets "which change transversely". It is unclear what is meant by this recitation. That is, it is unclear in what manner or form the jets change, or relative to what values or positions the jets change.

In claim 9, the recitation "thus prebonded" renders the claim indefinite, since it is unclear exactly what steps are considered to comprise such a "prebonding".

In claim 11, "and so on" renders the claim indefinite because it is unclear exactly what is encompassed by this recitation.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 5, 6, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Beaty et al (US 5,983,469).

Beaty discloses a method wherein a nonwoven is exposed to a row of water jet bonding treatments on one or both sides for hydrodynamic needling (see 30 in Fig. 2). Before or after a first hydrodynamic needling, the nonwoven at least partially undergoes a forced reorientation of the fibers; see tenter 26 in which the fabric is stretched before hydrodynamic needling (30), or see weft straightener 40 after the hydrodynamic needling (Fig. 2). Both the stretching at tenter 26 and the weft straightening (40) would result in at least partial reorientation of the fibers, as claimed. After the reorientation of the fibers (26 or 40), the nonwoven is again subjected to a further water jet treatment (see 32). Regarding claim 2, the tenter 26 stretches the nonwoven over its width as claimed (see e.g. col. 2, lines 58-65). Regarding claim 5, after hydrodynamic needling at hydraulic treatment module 30, the nonwoven is exposed to water jets (at module 32) uniformly over the width transverse to the transport direction.

Regarding claim 6, Beaty discloses that the hydraulic treatment module 32 may comprise a jet strip having "staggered linear arrays of jet orifices 68" (see col. 9, lines 45-49 and Fig. 4D). This arrangement in which the water jets (emerging from orifices 68) are staggered in the transverse direction forms jets which "change transversely" (i.e. change in position) and are perpendicular to the plane of the nonwoven, which meets the limitations of claim 6, as well as understood. It is noted that applicant's specification appears to disclose that the jets "change" transversely by being staggered; to this same extent, the jets of Beaty change transversely by being staggered as shown in Fig. 4D.

Regarding claim 10, Beaty discloses an installation comprising a water needle punching device (30) combined with a following stretching device 38 which strains the nonwoven over the width. Alternatively with regard to claim 10, Beaty discloses a water needle punching device (30) combined with a stretching device 26 which forms a "following stretching device" to the extent claimed, since it "follows" device 16, 18, 20, 22, and 24 in the line of processing. The claim does not specify what the stretching device follows. In this latter case, the limitations of claim 11 are met as well since the stretching device is "again" followed by a water needle punching device 32 (i.e. "again" since the water needle punching device 32 is in addition to water needle punching device 30). Regarding claim 12, Beaty discloses an installation comprising a water needle punching device (30) combined with a following hydrodynamic needle punching device 32. The hydraulic treatment by the jets at module 32 results in reorientation of the fibers as they are impacted by the water jets, thus laterally changing the fiber orientation of the nonwoven uniformly over the width as claimed.

5. Claims 1-3, 5, 7, 8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kalwaites (US 3,747,161).

Kalwaites discloses a method wherein a nonwoven is exposed to a row of water jet bonding treatments on one or both sides for hydrodynamic needling (see Fig. 1). After a first hydrodynamic needling (A), the nonwoven at least partially undergoes a forced reorientation of the fibers by stretching (B), and then the nonwoven is again subjected to a further water jet treatment (C); see Fig. 1. Regarding claim 2, the stretching unit B stretches the nonwoven over its width (see col. 5, line 52 through col. 6, line 5). This stretching re-orientates the fibers as claimed. Regarding claim 3, the nonwoven is uniformly pressed over the width after a hydrodynamic needle punching; see squeeze rollers 21 and 22 which press the nonwoven over its width after hydrodynamic needle punching on drum 10 (Fig. 1 and col. 5, lines 1-8). Regarding claim 5, after hydrodynamic needling (at A), the nonwoven is exposed to water jets (see nozzles 12 at unit B) uniformly over the width transverse to the transport direction.

Regarding claim 7, the nonwoven repeatedly undergoes successive hydrodynamic needling (by means of successive rows of nozzles; see col. 5, lines 17-21)and is then stretched (B) and the needle punching again (C). The stretching (at B) is carried out while the nonwoven is completely supported over its width (see Fig. 1) as in claim 8.

Regarding claims 10-11, Kalwaites discloses an installation comprising a water needle punching device (A) combined with a following stretching device (B) which strains the nonwoven over the width, followed by another water needle punching device

(C). Regarding claim 12, Kalwaites discloses an installation comprising a water needle punching device (A) combined with a following hydrodynamic needle punching device (C). The hydraulic treatment by the jets from spray nozzles 12 results in reorientation of the fibers as they are impacted by the water jets, thus laterally changing the fiber orientation of the nonwoven uniformly over the width as claimed.

6. Claims 1, 2, 5, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Nozaki et al (US 4,883,709).

Nozaki et al disclose a method wherein a nonwoven is exposed to a row of water jet bonding treatments on one or both sides for hydrodynamic needling (col. 1, lines 1-2; col. 2, lines 47-51). After the first hydrodynamic needling, the nonwoven at least partially undergoes a forced reorientation of the fibers by stretching (col. 1, lines 67-68; col. 2, lines 51-56 and col. 2, line 63 through col. 3, line 2). This stretching results in at least partial reorientation of the fibers, as claimed (col. 4, lines 6-8). After the reorientation of the fibers by cross-stretching, the nonwoven is again subjected to a further water jet treatment (col. 2, lines 3-8 and col. 3, lines 25-29). Regarding claim 2, the web is stretched over its width (cross-stretched) as claimed (col. 2, lines 51-54). Regarding claim 5, after hydrodynamic needling, the nonwoven is exposed to water jets (in second water jet treatment; col. 2, lines 3-15 and col. 3, lines 63-66) uniformly over the width transverse to the transport direction.

Regarding claim 9, another nonwoven (sheet of short fibers) is supplied to the nonwoven which has been prebonded by the first hydroentangling treatment, and both

nonwovens are bonded together by the second hydroentangling treatment (col. 1, line 68 through col. 2, line 15; col. 3, lines 10-32; and see col. 5, line 53 in which the second sheet is disclosed as a "paper-like pulp fiber sheet" thus being a "nonwoven" as in claim 9).

Regarding claims 10-11, Nozaki et al disclose an installation comprising a water needle punching device combined with a following stretching device which strains the nonwoven over the width, followed by another water needle punching device (col. 1, line 64 through col. 2, line 15). Regarding claim 12, the installation of Nozaki comprises a water needle punching device (col. 2, lines 49-50) combined with a following hydrodynamic needle punching device (col. 3, lines 63-66). The hydraulic treatment by the jets results in reorientation of the fibers as they are impacted by the water jets, thus laterally changing the fiber orientation of the nonwoven uniformly over the width as claimed.

7. Claims 1, 4, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Dillinger (US 2004/0096620).

Dillinger discloses a process in which a nonwoven fabric is hydroentangled, embossed, and then wire-napped to re-orient the fibers to make the embossed pattern indistinct. Dillinger teaches that the hydroentangling process is that which is disclosed by U.S. Patent No. 3,485,706 (paragraph 0048). In the '706 patent, the fabric undergoes treatment by successive series of jets as shown in Fig. 2 (see manifolds 35-40) or Fig. 40 (see 90, 91, and 92). After the treatment by the first jets (e.g. 35 in Fig. 1

or 90 in Fig. 40), a second treatment by jets 37-38 (Fig. 1) or jets at drum 91 (Fig. 40) is performed, which reorients the fibers as in claim 1. Then a subsequent hydrodynamic needle punching is performed by manifolds 39 or 40 in Fig. 1 or at drum 92 in Fig. 40. Dillinger teaches that after this hdyroentanglement as in the '706 patent, the nonwoven undergoes a wire-napping treatment (0048-0049). Such wire-napping is "brushing" as in claim 4. The napping is performed uniformly over the width transversely as claimed, in that it treats the entire surface of the nonwoven, and reorients the fibers to make the embossed pattern indistinct (0026, 0032,0049).

Regarding claim 12, Dillinger discloses use of a device for water needling, for example that of U.S. Patent No. 3,485,706, followed by (thus "combined with") a following brushing device (wire napper) which laterally changes orientation of the fibers as claimed (see paragraphs 0026, 0048, 0049).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy B Vanatta
Primary Examiner
Art Unit 3765